

In addition, as required by 37 CFR 1.121(c)(1)(ii), this amendment is accompanied by another version of each rewritten claim marked up to show all the changes relative to the previous version of the amended claim. As stated in 37 CFR 1.121(c)(3), each claim in the clean version not accompanied by a marked up version constitutes an assertion that it has not been changed relative to the immediate prior version.

#### IN THE DRAWINGS

It is proposed to amend Fig. 1 (by adding reference numerals  $X_a$ ,  $X_b$ ,  $Y_a$ ,  $Y_b$ , 45, and 46 from Fig. 3) and Fig. 3 (by adding numeral 48 from Fig. 1 and numeral 40 from Fig. 2), in order to make Fig. 1, 2 and 3 more consistent with each other.

It is proposed to amend Fig. 4A-4B and 5-8 to make them more consistent with Fig. 3 by adding a second waist region 38 as shown in Fig. 3. It is also proposed to add to Fig. 6-8 the X-Y coordinates from Fig. 3.

#### REMARKS

Applicants wish to thank the Examiner for the examination of the above-identified Application. This response fully addresses the issues raised in the aforementioned Office Action. A detailed discussion of each issue is provided in the sections that follow. No new matter is added by this response.

#### Claim Rejections Under 35 U.S.C. § 112

The Examiner rejected Claims 1-18 under 35 U.S.C. 112, second paragraph.

With respect to Claim 1, the Examiner was not clear of the limitation “peel resistance” and its relation to a “Peal Load” disclosed in the specification. Applicants amended the independent Claim 1 and its dependent Claim 12 (the dependent Claims 2 and 11 have been cancelled; therefore the rejections of these claims are moot) to delete “peel resistance” and add “peak load” to more clearly claim the invention. Support for “peak load” can be found, for example, on page 29, lines 5-9, where “The Peak Load is the highest point on the curve/data...” The Peak Load represents “the fastening system’s resistance to peel mode disengagement,” which is claimed in the above-amended claims.”

With respect to Claim 2, the Examiner stated that there is no antecedent basis for “the first direction.” Claim 2 has been cancelled; therefore, the rejection is moot.

With respect to Claims 3, 4, 5, and 10, the Examiner questioned “a laterally inboard edge.” The Applicants amended Fig. 1, 3, 4A-4B, and 5-8 to make the above figures more consistent with each other by adding reference numerals Xa, Xb, Ya, Yb, 45, and 46 and also adding the first waist region 38 to Fig. 4A-4B, and 5-8. Now the above figures more clearly show the laterally inboard edge Xb and the laterally outboard edge Xa, wherein the laterally inboard edge Xb is disposed closer to the central longitudinal axis 100 of the article 20 than **does** the lateral outboard edge Xa.

With respect to Claim 5, the Examiner questioned antecedent basis for “the effective longitudinal dimension.” Claim 5 has been cancelled; therefore, the rejection is moot.

With respect to Claims 6 and 7, the Examiner questioned “selectively enhanced” and selectively damaged.” Claims 6 and 7 have been cancelled; therefore, the rejections are moot.

With respect to Claim 8, the Examiner questioned “inherent directionality.” Claim 8 has been cancelled; therefore, the rejection is moot.

With respect to Claim 11, the Examiner questioned the longitudinally outboard edge. Claim 11 has been cancelled; therefore, the rejection is moot.

With respect to Claims 12 and 13 , the Examiner questioned the claimed ranges. Claims 12 and 13 have been amended to more clearly claim the invention. Support for the amendments can be found on page 18, lines 8-13 and lines 20-26.

With respect to Claim 15, the Examiner questioned the construction of Markush claim. Claim 15 has been amended to more properly construct the claim.

Accordingly, applicants respectfully request reconsideration and withdrawal of the rejections under 35 U.S.C. 112, first paragraph.

### **Claim Rejections Under 35 U.S.C. § 102(b)**

The Examiner rejected Claims 1-3, 5-8, 11-16 under 35 U.S.C. 102(b) as being unpatentable over Scripps (US Patent 4,846,815).

The Examiner took a position that because Scripps discloses an absorbent article with a fastener having a shape disclosed by applicants in Fig. 3 of the present application, and because Scripps discloses the claimed at least 750 grams of peel resistance in the primary direction of load bearing, the fastener of Scripps will have also a peel resistance in a direction other than that of the direction of primary load bearing, as claimed.

Applicants respectfully request reconsideration and withdrawal of the rejections in view of the amended claims.

The independent Claim 1 has been amended to better claim the invention. Support for the amendments can be found on page 21, lines 20-28, and in the cancelled Claim 2.

The Scripps reference does not anticipate the independent Claim 1, as amended, because the Scripps reference does not teach all limitations of Claim 1, as amended. For example, the Scripps reference at least does not teach an article having a surface fastening system including an effective dimension Y extending substantially parallel to a longitudinal axis of the article, and the effective dimension Y increasing from a laterally outboard edge of the first fastening element to a laterally inboard edge of the first fastening element. (The Examiner questioned “effective dimension Y” with respect to Claim 5, which has been cancelled. Applicants direct the Examiner to page 21 and Fig. 4B, describing and showing effective dimension Y, the length of which changes as a peel mode progresses, thus changing or effecting the peel resistance or peel load of the fastening system of the present invention as peel mode progresses. )

Claims 1, 3-4, 9, 12-14, 15 and 18 depend from the independent Claim 1. Applicants believe that Claim 1, as amended, is not anticipated by the Scripps reference, therefore, Claims 3-4, 9, 12-14, 15 and 18, depending from Claim 1, are also not anticipated by the Scripps reference. Accordingly, Claims 1, 3-4, 9, 12-14, 15 and 18 should be allowed.

New independent Claims 19 and 29 also include limitations which are not disclosed in the Scripps reference. For example, with respect to the independent Claim 19, the Scripps reference at least does not teach an article having a surface fastening system including an effective

dimension X extending substantially parallel to a lateral axis of the article, the effective dimension X changing between a longitudinally inboard edge of the first fastening element and a longitudinally outboard edge of the first fastening element. Support for the above limitation can be found on page 21, lines 15-25 and in Fig. 4C.

With respect to the independent Claim 29, the Scripps reference at least does not teach an article having a fastening system with a first fastening element including a longitudinally inboard edge having at least a portion of the longitudinally inboard edge being unjoined from the article. Support for the above amendment can be found on page 22, lines 17-29, and in Fig. 6 and 7.

Accordingly, the independent Claims 19 and 29 are not anticipated by the Scripps reference. Because Claims 20-28 and Claims 30-37 depend, respectfully, from Claims 19 and 29, Claims 20-28 and 30-37 are not anticipated by the Scripps reference. Accordingly, Claims 19-39 should be allowed.

#### **CONCLUSION**

In light of the above amendments and remarks, Applicants respectfully request that the Examiner reconsider and withdraw rejections and allow the pending claims 1, 3-4, 9, 12-13, 14-15, 18, and 19-37. No new matter has been added in this response. Issuance of a Notice of Allowance at an early date is respectfully requested.

Respectfully submitted,

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VERSION MARKED UP TO SHOW CHANGES  
SUBMITTED IN ACCORDANCE WITH 37 CFR 1.121(b)(1)(iii)  
IN RESPONSE TO OFFICE ACTION OF 15 MARCH 2002

IN THE SPECIFICATION

**Marked up version of the first paragraph on page 21, extending into page 22:**

In another embodiment, the shape of the engaged area of the fastening element(s) may be optimized for a higher resistance to peel mode disengagement in the yz-plane and a lower resistance to peel mode disengagement in the xz-plane. Figures 4A through 4C, for example, show possible shapes of fastening elements that may be used in a fastening system. Figure 4A shows a typical rectangular-shaped fastening element. Figure 4B shows one embodiment of a fastening element of the present invention in which the shape of the engaged area of the fastening element has been designed in order to decrease the resistance to peel mode disengagement in the yz-plane as peel progresses from a longitudinally inboard edge A to a longitudinally outboard edge B by decreasing the effective x-dimension along at least a portion of the path from the longitudinally inboard edge A to the longitudinally outboard edge B. Thus, the resistance to yz-plane peel is initially higher at edge A and may decrease at some point between edge the longitudinally inboard A and edge the longitudinally inboard B. The initial peel resistance at ~~the~~ a laterally inboard outboard edge C, however, has been decreased by shaping the laterally ~~inboard~~ outboard edge C so that the effective dimension in the y-direction increases for at least a portion of the path from the laterally outboard edge C to a laterally outboard inboard edge D. For example, as shown in Figure 4B, y-dimension Y1 is smaller than Y2 and Y3. Thus resistance to peel in the xz-plane is initially lower at the laterally outboard edge C, then may increase along the path to the laterally inboard edge D. In one particular embodiment, the surface fastening system 40 may include a hook and loop fastener in which at least the engaged area in common between the hook element and the loop element are shaped as the fastening element 56 shown in Figure 4B when configured as intended for use of the article. That is, in general, the effective length of dimension Y increases along at least a portion of the path from the laterally outboard edge C to the laterally inboard edge D, and the effective dimension X decreases along at least a portion of the path from the longitudinally inboard edge A to the longitudinally outboard edge B. In certain embodiments such as shown in Figure 4C, the effective dimension X may initially decrease or increase along a portion of the path from a

longitudinally inboard edge A' to a longitudinally outboard edge B' then increase or decrease along another portion of the path from the longitudinally inboard edge A' to the longitudinally outboard edge B'.

**Marked-up version of a second paragraph on page 12, extending into page 23, with the following rewritten paragraph:**

Figures 6, 7 and 8 show embodiments in which the peel resistance of the surface fastening system 40 may be selectively enhanced. In Figures 6 and 7, for example, all or a portion of a longitudinal inboard edge 66 of fastening element 68 may be unjoined from the underlying structure of the article 20. In these figures, the portion of the fastening element 68 joined to the underlying structure of the article 20 is shown cross-hatched. In this embodiment, all or a portion of the longitudinal inboard edge 66 of the fastening element 68 is free to pull away from the underlying structure of the article 20. This may increase the peel resistance of the surface fastening system 40. Without being bound by theory, it is believed that as the edge pulls away from the underlying structure of the article 20, the disengagement mode shifts gradually away from a peel mode to a shear mode of disengagement. In many surface fasteners such as a hook and loop fastener, it is more difficult to disengage the fastener in shear mode than in peel mode. Thus, the resistance to disengagement of the fastener to a force in the yz-plane may be increased. In another embodiment, such as shown in Figure 8, a portion 72 of the fastening element 70 other than the edge may be unjoined from the underlying structure of the article 20. In this fastener, the peel resistance in this portion 72 of the fastener may be selectively increased. In addition, in embodiments in which at least a portion of fastening element 68 is joined to a carrier web and at least a portion of the carrier web and/or fastening element 68 may be unjoined from the underlying structure of the article 20, at least a portion of the carrier web or the fastening element 68 can be extensible or elastomeric. For example, a vacuum formed elastomer material such as described in United States Patent Application Serial No. 08/816,106 filed on March 14, 1997, which is incorporated by reference, may be used. Any other extensible and/or elastomeric/elastic materials, including those previously referenced herein, may also be used. Embodiments have also been contemplated in which at least a portion of fastening element 68 is joined to a carrier web, and at least a portion of the carrier web and/or fastening element 68 may be unjoined from the underlying structure of the article 20 and at least a portion of the carrier web is extensible or elastomeric.

AMENDED CLAIMS MARKED UP TO SHOW CHANGES  
SUBMITTED IN ACCORDANCE WITH 37 CFR 1.121(c)(1)(ii)  
IN RESPONSE TO OFFICE ACTION OF 15 MARCH 2002

CLAIMS

1. (Amended) An article to be worn about a wearer comprising:  
a surface fastening system having a primary direction of load bearing, the surface fastening system including a first surface fastening element and a second surface fastening element, the first fastening element being joined to the article, the second fastening element being disposed so as to be generally in a face to face relationship with the first fastening element when the surface fastening system is in a fastened configuration, the surface fastening system further including an effective dimension Y extending substantially parallel to a longitudinal axis of the article, the effective dimension Y increasing from a laterally outboard edge of the first fastening element to a laterally inboard edge of the first fastening element,  
wherein the surface fastening system has a peak load in the primary direction of load bearing that is less than a peak load in the direction other than the primary direction of load bearing.  
~~wherein the surface fastening system has a peel resistance in a direction other than the primary direction of load bearing greater than or equal to about 1000 grams.~~
3. (Amended) The article of Claim 2 1 wherein the first fastening element further includes a ~~laterally inboard edge and~~ a longitudinally inboard edge, the longitudinally inboard edge being longer than the laterally ~~inboard~~ outboard edge.
4. (Amended) The article of Claim 2 1, wherein the first fastening element further includes a ~~laterally~~ longitudinally inboard edge and a longitudinally outboard edge, the longitudinally ~~outboard~~ inboard edge being longer than the ~~laterally inboard~~ longitudinally outboard edge.
12. (Amended) The article of Claim 1, wherein the peak load in the direction other than the primary direction of load bearing is selected from one ~~or more~~ of the group of greater than about 1000 grams, greater than or equal to about 1300 grams, greater than or equal to about 1600 grams, and greater than or equal to about 2000 grams.
13. (Amended) The article of Claim 1, wherein the peak load of the fastening system in the primary direction of load bearing is selected from one of the group of less than or

equal about 1000 grams, less than or equal about 750 grams, and less or equal than about 500 grams.

15. (Amended) The article of Claim 1, wherein the article is selected from one ~~or more~~ of the group of[:] an absorbent article, a diaper, a sanitary napkin, and a body wrap.
18. (Amended) The article of Claim 1, wherein the article is adapted to form a pant-like article and wherein each of the first and second fastening elements are releasably attached to form a waist opening and a pair of leg openings ~~fastening system of the article is pre-fastened~~.